

PROGRESS OF MEDICAL SCIENCE.

THERAPEUTICS.

UNDER THE CHARGE OF

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OVARIAN THERAPY.

M. F. JAYLE states that this consists of the administration of (1) the ovary in its natural condition; (2) ovarian powder obtained by desiccation or a glycerin extract. The second in two-grain doses a quarter of an hour before the noonday meal is preferred. The indications are against (1) the accidents provoked by castration; (2) certain ovarian lesions; (3) the normal menopause; and (4) Basedow's disease, osteomalacia, etc. He concludes that (1) the ovary appears to be the source of an internal secretion which is useful to the economy of the woman. (2) This medication appears to be without danger. (3) It is followed by permanent success in the troubles provoked by the artificial menopause. (4) It appears that it can be used to advantage in the different symptoms due to an ovarian lesion (amenorrhœa, dysmenorrhœa, adiposis, chlorosis). (5) It seems to be useful in certain cases against the symptoms of the natural menopause.—*La Presse Médicale*, 1896, No. 71, p. 437.

THE EFFECTS OF THE ADMINISTRATION OF THE PITUITARY GLAND.

MM. MAIRET and BOSC have used the gland of the ox, either triturated or macerated. In animals (rabbits), excepting disturbances evidently due to local infection produced by the subcutaneous injection, very slight effects were obtained—a transient elevation of temperature, most marked two hours after the injection. Injected into the veins it produces disturbances similar to those obtained after injection of blood, namely, death from coagulation. If treated by sodium chloride or by heat it produces results similar to those of blood-serum when similarly treated, but is distinguished only by a more marked myosis. If given by the mouth, beside a slight elevation of temperature, there are noticed gastro-intestinal disturbances and a temporary albuminuria. Evidently this substance possesses only a slight degree of

toxicity. With dogs nothing of importance is noticed; subcutaneous injections give rise to some emaciation and slight and temporary elevation of temperature. With healthy men substantially the same results were reached. To ascertain its effect upon epilepsy twenty-one cases were studied; of these, six are carefully reported. From these the following conclusions are presented: (1) The injection and ingestion of the pituitary gland do not diminish the attacks of epilepsy; if it has any action, it is generally to increase them. (2) The ingestion of this substance produces, quite constantly, attacks of delirium. These attacks, which come on three or four days after its administration, resemble in certain cases the agitation peculiar to epileptics, if indeed they may not be simple coincidences. In other cases they present especial characteristics which have not been before noticed.—*Archives de Physiologie*, 1896, No. 3, p. 600.

THE ACTION OF THYROID PREPARATIONS UPON PATIENTS SUFFERING FROM GOITRE.

DRS. ARTHUR ISSAI, BERNHARD VAS, and GÉZA GARA have made use of the tablets in three very carefully observed cases, and report their conclusions as follows: (1) The goitre has diminished in size. (2) The body-weight is diminished; the most marked result being obtained after long-continued use, and is in proportion to the amount of the gland-substance taken. (3) The amount of urine is increased. (4) The nitrogenous excretion in the urine is increased. (5) The balance of nitrogenous excretion is a negative one, *i.e.*, more is excreted than is taken in. (6) The uric-acid excretion is increased, especially during the first days of the treatment. (7) The excretion of sodium chloride and of phosphoric acid is increased. From these observations it would seem that the fat-layer very probably shares in the diminution of weight.—*Deutsche medicinische Wochenschrift*, 1896, No. 28, S. 439.

ACCIDENTS CHARGEABLE TO SERUM-THERAPY.

DR. G. H. ROGER states that the appearance of an abscess is not due to the method, but to want of care, insufficient disinfection of skin or instruments, or to change in the serum. The only exception to this statement is when antistreptococcal serum obtained from animals immunized by means of living cultures is used, and the use of this serum should be abandoned. Exanthemata are not due to the same causes as are abscesses. They are not to be avoided, for they are caused by normal as well as by the various antitoxic serums. They appear generally three or four days after the injection, and even to the tenth or twentieth day. The age of the subject nor the amount of the serum used has no connection with their appearance; all depends upon the individual predisposition. Other manifestations—urticaria, erythemata, and coincidently fever and articular symptoms, which may seem to be severe and sometimes really alarming symptoms, as albuminuria—hemorrhages and gastro-intestinal disturbances may be observed. Some serums are prone to give rise to disturbances; others are harmless. It would seem that these manifestations are less frequent if the serum is removed from the animal while fasting. The arthropathies do not go on to suppuration (Broca's case

is an exception). The fever is often slight and temporary; it is observed after the injection of normal serum. Serum has a diuretic effect according to some writers; others have noticed a diminution of urine. It, however, increases the excretion of urea and the phosphates and diminishes that of the chlorides. As for albuminuria, the opinions are varied. The view of the author seems to be that it may give rise to this condition; generally it is but temporary. Besides hemorrhagic nephritis and cutaneous hemorrhage, notably purpura, it may produce epistaxis and uterine hemorrhage. In one instance of pregnancy it produced no disturbance. As to modification of the blood, it is difficult to say whether these hemorrhages are due to vasomotor changes or to those of the blood itself. It evidently produces a leucocytosis. Other accidents have been noted—vomiting, profuse, dysenteric, and sanguinolent diarrhoeas, glandular swellings, swelling of the spleen, and cardiac disturbances. In spite of this long list of accidents there is no reason for restriction of the use of these serums, but our efforts should tend toward improvements in their manufacture, so that useless and harmful substances may be eliminated.—*Gazette hebdomadaire de Médecine et de Chirurgie*, 1896, No. 64, p. 757.

ARTIFICIAL DIPHTHERIA ANTITOXIN.

DR. G. SMIRNOW states that the preparation of the toxins in bouillon is easier, more convenient, and cheaper than in serum, and in addition equally good results are obtained. This substance is obtained by electrolysis of the diphtheria toxins, and its use upon the twelve guinea-pigs previously infected with diphtheria shows that in each instance recovery followed.—*Berliner klinische Wochenschrift*, 1896, No. 27, S. 597.

KITASATO'S ANTICHOLOERA SERUM.

DR. A. NAKAGAWA reports the results of its use in one hundred and ninety-three cases. The former rate of mortality (among Japanese) has been about 70 per cent. In these cases the percentage was lowered about 20. The subsidiary results are similar to those of diphtheria antitoxin: (1) Urticaria, very common. (2) Arthralgia, observed in only eighteen cases. (3) Myalgia in six cases. The difference in prognosis, according to the time which had elapsed before coming under observation, is shown as follows: Less than eight hours, no deaths; eight to twelve, 22.2; twelve to twenty-four, 32.1; twenty-four to forty-eight, 39.7; forty-eight to seventy-two, 38.7; over seventy-two, 31.1 per cent. mortality. Three cases were observed in children under two years of age.—*British Medical Journal*, 1896, No. 1855, p. 121.

THE RESULTS OF HAFFKINE'S ANTICHOLOERA INOCULATIONS.

MR. ARTHUR POWELL has summarized all of the observations in India hitherto published and while they are not sufficiently numerous to have definite conclusions, they hold forth strong encouragement for continuing the experiments on an extended scale. He concludes: (1) That the inoculations even in the larger doses hitherto used do not confer a complete immunity. (2) That a considerable degree of immunity seems to be conferred

when the doses injected are sufficiently large to produce marked febrile reaction; and (3) that smaller doses confer little or short-lived protection.—*The Lancet*, 1896, No. 3803, p. 169.

ACUTE HEMORRHAGIC SEPTICÆMIA TREATED BY ANTISTREPTOCOCCUS SERUM.

MESSES. CHARLES A. BALLANCE and FRANCIS C. ABBOTT report a single case. The patient, a physician, pricked his thumb in making a *post-mortem* examination. Cellulitis and lymphangitis followed, and within twenty-four hours the whole body was covered with a scarlet septic erythema. The face was puffy and the eyes suffused. There was severe pain in the arm, and in the intervals of pain he was listless and drowsy. Later the rash became hemorrhagic in places, the drowsiness became more marked, the respiration was rapid, vomiting occurred several times, and there was slight bleeding from the nose. Less than a drachm of antistreptococcus serum was injected and repeated every four hours. Strychnine and digitalis were subsequently given, and upon the third day of its administration the dose of the antitoxin was doubled. Convalescence was established, although the rash did not disappear until the eighth day of the disease. The following results are apparently obtained: (1) The mind became clear, notwithstanding the high fever. (2) The frontal headache ceased. (3) The tongue began to clear, and became moist from the edge until it was clean, moist, and of a peculiar pink color over its entire surface. (4) The pulse became slower and of better quality. (5) The respiration was slower and never jerky afterward. (6) The skin, which was dry and feverish, became moist, and sweating occurred. (7) The wounds (incisions, to relieve tension) healed without suppuration; and the threatened inflammation of the great synovial sac under the anterior annular ligament subsided.—*British Medical Journal*, 1896, No. 1853, p. 2.

THE EXCEPTIONAL EFFECTS OF THE BROMIDES.

DR. S. WEIR MITCHELL notes, among the effects, irritability, increase of irritability or melancholy at menstruation, bad temper, suicidal or homicidal tendencies, temporary delusions in trauma affecting the brain, and exceptionally melancholia may rise to the grade of danger and occasion suicidal impulses. In one instance when irritability followed the use of bromides, excitability could be as easily and more quickly awakened by the smallest amount of alcoholic stimulus or any large use of tobacco. It is also known that the bromides are competent to give rise to suicidal and homicidal impulses.—*University Medical Magazine*, 1896, No. 9, p. 661.

POISONING BY PYROGALLIC ACID.

M. DALCHÉ reports that a young man of twenty-three years took two hundred and twenty-five grains of this drug dissolved in absinthe and water. In the evening he suffered from black vomit and burning secretions in the throat. The second day there was slight jaundice, the lips were purple, the urine was dark, almost black, and contained methæmoglobin and oxyhæmoglobin. The liver and spleen were enlarged. Two days after he became deli-

rious and died in coma. On necropsy the alimentary canal, lungs, and brain were found to be healthy. The liver and spleen were enlarged. The kidneys were colored dark brown, the tubes of the cortex and the glomerular cavities were filled with small refractive spheres, which were also found in the capillaries and veins. These spheres, of the size of a red blood-corpuscle, gave the micro-chemical reaction of iron. The epithelium of the convoluted tubes seemed to be unchanged and did not contain any pigment. It may be concluded that in this instance there was a profound change in the blood, with destruction of the corpuscles, a lesion entirely different from that of paroxysmal hæmoglobinuria.—*Journal des Praticiens*, 1896, No. 22, p. 349.

ANTITETANIC SERUM.

M. HAUSHALTER states that one has his choice between the liquid serum, which should be employed in large doses; the dry, which is more active, and the antitoxin of Tizzoni. The statistics do not show in the mortality a sufficient lowering for forming an opinion, since the death-rate varies considerably according to the intensity of the disease. The general impression obtained from his paper is that the serum does not influence the course or the result of the disease when it is of a severe or rapid character, and that when cure has resulted it is apparently independent of the action of the serum. The preventive action is better established, but there are great difficulties in its application, for no one knows what wounds and what injuries will be followed by tetanus.—*Journal des Praticiens*, 1896, No. 33, p. 528.

THE INDICATIONS FOR SERUM-THERAPY IN SYPHILIS.

DR. ROCHON calls attention to the fact that the treatment of syphilis does not consist only in gorging the patient with mercury or the iodides, but we should attend to the organism itself. It is proved that the organism can battle with an infection by producing a substance which will arrest or at least modify the evolution of a virulent agent—that is, an antitoxin. Mercury and the iodides, either by increasing the resistance of the organism or by diminishing the virulence of the infectious agent, can give victory to the subject attacked; but if the subject is incapable of reaction, then it is necessary to interpose another force. In case the organism is incapable, and when hygiene and rest remain insufficient, then sero-therapy finds its true and indeed its only indication. Three observations are reported, the serum being taken from a syphilitic of from six to eight years' duration, the last symptoms dating back three to six months. The conclusion is that the serum, when used for severe manifestations, is of doubtful power or even inert. Its use is chiefly then in the tertiary stage of the disease.—*La Médecine moderne*, 1896, No. 70, p. 553.

VACCINE PRODUCED BY PASSING THE VIRUS OF SMALLPOX THROUGH THE COW AND CALF.

DR. W. J. SIMPSON reports his experiments, which show an intimate relationship between smallpox and vaccine. In these experiments, some of which were carried out in Aberdeen and others in India, successes were

obtained from inoculations of lambs, cow, heifer, healthy fowl, sheep, and calves, from which active vaccine was obtained.—*Indian Medical Gazette*, 1896, No. 6, p. 205.

THE TREATMENT OF NEURALGIA BY INJECTIONS OF OSMIC ACID.

DR. ERWIN FRANCK reviews the literature from 1882, recommending osmic acid, 1; distilled water, 6; glycerin, 4; (Schapiro) to be kept in a closed bottle. Of this one-sixth of a grain of the drug is to be used, although in one instance the dose was four times this amount. Three cases are reported—right facial neuralgia, sciatica, and tabes in ataxic stage. In the first cure was obtained; in the second disappearance of the pain for eight weeks, recurrence which the treatment failed to relieve; in the third relief of the hyperaesthesia and neuralgia of the ulnar nerve, cessation of the pain during time of observation (one month). The needle should be inserted perpendicularly and deep into the muscles or to the bone as near as is possible to the most painful point, the overflow on the skin being prevented by a bit of cotton. When injections are made into the face, a smaller quantity should be used in order to avoid induration, which may be of a dark color.—*Fortschritte der Medicin*, 1896, No. 16, S. 609.

PANBOTANO.

DR. GABRIEL POUCHET states that this drug, of Mexican origin, contains (1) an appreciable quantity of saponin. (2) An alkaloid, at present undetermined, of which a hydrochloride has been prepared. (3) A colored, and (4) a colorless substance. (5) A certain proportion of tannin. The alkaline resinate (colored resin combined with an alkali) is an energetic irritant, and in intraperitoneal injection (guinea-pigs) caused death; the symptoms are depressed temperature, abolition of reflexes, slowed heart and respiration. A solution of the alkaloid acts similarly, the slowing being more marked. In man the drug was found equally irritating, due, in great part, at least to the colored resin. These experiments are insufficient to interpret the action of the drug, which appears to be efficacious in malarial disease, but they serve to demonstrate that there is to be found in the drug several active principles whose pharmacodynamic study presents much interest.—*Les nouveaux Remèdes*, 1896, No. 15, p. 441.

PELLOTIN.

DR. A. HEFFTER has carried out laboratory experiments upon this drug which possesses the chemical formula $C_{12}H_{19}NO_5$. This occurs in crystalline tablets of a bitter taste, with difficulty soluble in water, but readily in alcohol, ether, and chloroform. With acids can be made crystalline salts, the hydrochloride being chosen for therapeutic purposes. With frogs, after injection, slight narcosis follows in from ten to fifteen minutes. The reflexes are somewhat diminished and strong irritations are necessary to obtain repose. After twenty to thirty minutes there comes a distinct increase of reflex excitability, then follows spasms, recalling those of strychnine-tetanus. This period of increased excitability of the reflexes may continue with

undiminished intensity for several days. If large doses are now administered, this condition sooner or later passes into one of complete paralysis. The irritability of motor nerves is destroyed only after long periods of spasms. The explanation of these symptoms lies in the increased excitability of the spinal cord. It is excreted by the kidneys, at least the alkaloid can be found there in small quantities. For healthy men the dose, as a hypnotic, is about a grain. About two hours after taking it by the mouth there come on a feeling of weariness, weight of the limbs and eyelids, and a disinclination to bodily and mental exertion. The pulse-rate is diminished for about an hour. Headache and nausea have been observed. The poisonous symptoms are those of a narcotic through paralysis of the brain, and later tetanic symptoms which have their origin in the increased irritability of the spinal cord. This places the drug, from the pharmacological standpoint, in the morphine group.—*Therapeutische Monatshefte*, 1896, Heft 6, S. 327.

A CASE OF CEPHALIC TETANUS.

DR. J. M. VAN COTT reports that of a four-year-old boy, who presented muscular twitching of the face, the mouth being drawn slightly to the left side, general irritability of temper, and attacks of screaming with no apparent cause. Three days later there was paralysis of muscles of the right side of the face, the mouth drawn to the opposite side, the forehead of the left side wrinkled, ptosis of right eyelid, and complaint was made of pains in the back and general stiffness of the arms and legs. Two days later there appeared spasm of the muscles of deglutition, mastication, and those of the neck, the head was drawn backward and the jaws firmly locked. This attack lasted for ten minutes, when the muscles of the neck and back relaxed, but the jaws remained closed. Profuse flow of saliva appeared later. During the following two weeks all the symptoms increased in severity, opisthotonos being constantly present; and death took place about one month from the date of the first record, during a severe convulsion. The only lesion noted was a white pimple at the base of the nose, which, according to his mother, had been present for ten days. The treatment consisted of absolute quiet, warm baths, chloral, and potassium bromide in large doses by the mouth and by the rectum. He was fed through a tube upon peptonized foods, stimulants, and milk.—*Brooklyn Medical Journal*, 1896, No. 7, p. 401.

[See THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, 1896, vol. cxi. p. 590.—R. W. W.].

EUCAINE.

DR. GÖRL has used this drug in dermatological and urinary practice because of the expense of cocaine, notably in cystoscopic work. The best results were obtained with a one-half of 1 per cent. solution, which has been used after the manner of Schleich's infiltration method. The first injection is somewhat more painful than Schleich's solution; with the rest there was noticed no difference. Phimosis and hubeos can be operated upon with absolute freedom from pain, and after infiltration of the base large condylomata acuminata can be removed by the galvano-cautery loop. Furuncles can be

incised without the least pain. An advantage is found in the fact that the drug can be heated with spring-water without decomposition, and thus sterile solutions can be obtained *ex tempore* without the addition of a disinfectant. Since this drug is an irritant, it should not be used in the urethra when more frequent than daily anæsthesia must be obtained. The hyperæmia resulting from the use of this drug is a contraindication to its use in cystoscopic investigations, in which a tumor or lesion with tendency to hemorrhage is suspected.—*Therapeutische Monatshefte*, 1896, Heft 7, S. 378.

ARSENICAL PARALYSIS.

M. COMBY reports that a girl of seven years, suffering from a severe chorea, received about four grains of arsenous acid in eleven days. The choreic movements permanently ceased upon the fifth day, but on the sixth there was some vomiting. Two months later she returned, presenting a paraplegia which had existed for six days. That is to say, she had remained entirely well for forty-six days after the last dose of arsenic. Upon her reappearance there was absolute loss of power of the lower limbs, abolition of the patellar reflexes, and of the plantar sensibility to tickling, but there was preservation of the sensibility to pain. There was no muscular atrophy nor appreciable trophic disturbances, the intelligence was good, there was no pain, and the appetite was preserved. She was treated by electricity, strychnine, and sulphur baths. In spite of this the paralysis progressed and involved the trunk and upper extremities. Control over the bladder and bowels was lost. After ten days this incontinence ceased, and movement returned to the upper and later the lower limbs. Five weeks later the child was cured, she walked alone, stood upon one foot, the tendon-reflexes returned, and the general condition continued to be excellent. There was no doubt that the dose of arsenic was too large, and it should not be pushed beyond the limits of tolerance, but stopped when nausea, vomiting, and gastric disturbances present themselves.—*Journal des Praticiens*, 1896, No. 27, p. 428.

THE TREATMENT OF CONSTIPATION.

DR T. LAUDER BRUNTON regards this symptom as the reaction of a healthy organism to unfavorable surroundings, viz., too soft food, too little water, or too little exercise. For the first, one may advise bread, either made of the whole grain or with more or less bran; vegetables in abundance, either cooked, as spinach, cabbage, broccoli, Brussels-sprouts, cauliflower, carrots, turnips, parsnips, and the like, or raw, as tomatoes or celery. Fruits are of advantage—melons, apples, oranges, and figs. When stewed prunes are inefficient in keeping the bowels open, some senna leaves may be tied in a bag and placed in the receptacle in which the prunes are to be stewed. This plan has often been successful when the ordinarily stewed prunes have failed. Sugars in themselves are useful laxatives. A favorite addition to the breakfast is marmalade which contains vegetable salts, sugar, and also the hard skin of the orange cut into small pieces, which are rather indigestible and give a mechanical stimulus to the bowel. Water, insufficient in quantity or abnormal in quality, is a cause of dryness of the bowel which results in

constipation, which may be lessened by the taking of a tumblerful of hot or even of cold water on rising in the morning and on going to bed. For waters from a chalky soil, some of the bottled waters, soda, potash, or aerated water, should be substituted. The habit of evacuating the bowels at a certain time should be formed; at night if the patient suffers from hemorrhoids. Exercise is of advantage, massage, rubbing the bowels in the direction taken by the hands of a watch, are also useful. In delicate women, especially those suffering from ovarian or uterine trouble, exercise may be harmful. In defecation where the floor of the perineum is lax it may be necessary to press the fecal mass forward in something of the same way in which the accoucheur turns forward the child's head. Open-air defecation causes a stretching of the floor of the pelvis and affords support to the fecal mass as it is forced backward by the action of the abdominal muscles. This can be imperfectly imitated in the closet by the patient leaning forward to an acute angle. In some cases hydropathic treatment is useful, wet compresses to the abdomen two or three times daily and sitz baths, cold in summer and with the chill taken off in winter.—*The Lancet*, 1896, No. 3796, p. 1483.

MEDICINE.

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SYRINGOMYELIA FOLLOWING TRAUMATISM.

EULENBURG reports a case, one of three similar ones he has had occasion to examine. A tinsmith, aged forty years, accidentally burned his right thumb over a gas-flame in 1886. There was great pain, and a bleb formed, but the man wrapped up the thumb and continued to work. Five days later a bit of zinc-plate, wet with hydrochloric acid, got under the dressing and directly on the wound. On the following days the patient had repeated attacks of nausea, with temporary loss of consciousness, followed by severe and extensive phlegmons, requiring deep incisions and threatening the loss of the thumb. There was no diminution of sensibility. No foreign body could be found then, nor could one be found at first in a skiagraph. The latter seemed to reveal disease of the phalanges and metacarpal bones of the injured hand, the bones giving fainter pictures than those of a normal hand. Later, however, a small foreign body could apparently be seen at some distance from the old wound, perhaps a fragment of the original piece of metal. After the inflammation subsided the arm became weaker. The patient was